START

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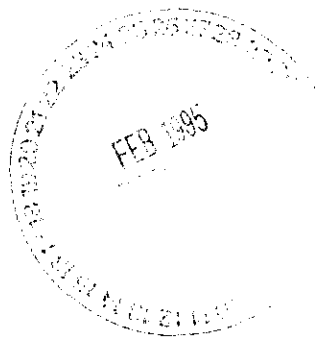
0040221

Subject Code:
Written Response Required? NO
Closes CCN: 0004011
OU: 200-BP-5
TSD: N/A
ERA: N/A

OCT 14 1994

Mr. David L. Lundstrom
200 Area Section Manager
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. Fourth Avenue
Kennewick, Washington 99336-6018

Mr. Douglas R. Sherwood
Hanford Project Manager
U.S. Environmental Protection Agency
712 Swift Boulevard, Suite 5
Richland, Washington 99352-0539



Dear Messrs. Lundstrom and Sherwood:

CURRENT STATUS OF THE 200-BP-5 OPERABLE UNIT (OU) TREATABILITY TESTS

In response to a letter dated, October 6, 1994, from Mr. Paul Beaver, U.S. Environmental Protection Agency (EPA), the following provides EPA and the State of Washington Department of Ecology with the U.S. Department of Energy, Richland Operations Office's (RL) justification for the current status of the treatability test operations at the 200-BP-5 OU. 38633

RL believes that Federal Facility Agreement and Consent Order (Tri-Party Agreement) Interim Milestone M-13-06A has been met and will continue to be met by the actions that are being taken with regard to the treatability tests. RL also wishes to clarify language in the Tri-Party Agreement Interim Milestone M-13-06A, change control form M-13-93-06, which you cite in your letter. Specifically, the language "The treatment, if determined effective, will continue to operate until the Record of Decision (ROD)" was meant to mean that after the treatability studies are completed the systems would continue to operate, if appropriate, until a ROD was issued. It was not meant to mean that the system would operate continuously and, in our opinion, was not meant to mean that RL was in violation of the intent of the milestone if it needed to shut the systems down for such reasons as routine maintenance, system modifications, or safety concerns.

Please note that, at the present time, the pump and treat systems are in the startup period. During the startup period, technical issues have been encountered and are currently being resolved in the most expedited manner

9513336.1664

practicable. As noted in the October 6 letter, a formal transmittal of the detailed justification for the current status of the treatability test operations has not previously occurred. The detailed description of the technical issues that have been encountered during the startup period and the actions taken to address those issues are formally described in the following discussion.

Two pilot-scale pump and treat treatability tests are located within the 200-BP-5 OU: 216-BY-Cribs and 216-B-5 Reverse Well. These treatability tests have been suspended since September 2, 1994, due to the following reasons:

1) Contamination of storage tanks used at the 216-BY-Cribs and 216-B-5 Reverse Well.

   Eight storage tanks were brought from B-Plant for use at the treatability sites: two tanks to store untreated water pumped from the aquifer; and two tanks to store treated water prior to reinjection. All of the tanks were discovered to be contaminated with an organic chelating agent (HEDTA) and aluminum nitrate after the treatability test was underway. Trichloroethylene at levels of approximately five parts per billion at the 216-BY Cribs was also discovered. This organic carbon contamination was suspected to be the result of impurities in resin. Based upon a technical analysis, the contaminated treated water cannot be reinjected into the aquifer since the chelating agent has the potential to mobilize any metals adsorbed within the aquifer system.

2) Reinjection of Treated Water at the 216-B-5 Reverse Well.

   Additional regulatory constraints (i.e., Federal Underground Injection Control Program regulations) were recently discovered that prevent the reinjection of treated effluent which exceeds the Drinking Water Standard (DWS) into the uncontaminated region of the aquifer (i.e., outside of the Sr-90, Cs-137, and Pu-239/240 groundwater plumes). These regulatory constraints impaired RL's ability to continue the treatability test after treated effluent samples showed that Sr-90 concentration level (approximately 50 pCi/L after treatment) exceeded the eight pCi/L of DWS.

Prior to resuming active treatment at the 216-BY Cribs and 216-B-5 Reverse Well, the treatment systems need to be decontaminated, the storage tanks thoroughly cleaned, and the treated effluents recycled through granular activated carbon to remove potential organic residual contamination resulting from the storage tanks. RL expects to complete these steps necessary for the resumption of operations at the 216-BY Cribs by October 24, 1994, (please refer to the treatment enclosed schedule).

As discussed at a meeting that occurred on October 4, 1994, with Mr. Paul Beaver, RL agrees with EPA's recommendation to reinject treated groundwater from the 216-B-5 Reverse Well back into a well within the primary

9513336.1665

contaminants of concern plume boundary as an interim measure by November 1, 1994, (please refer to the enclosed schedule). However, this will, in all likelihood, be unacceptable if pumping rates are increased in the future. Reinjecting at higher rates into the plume would probably create a recirculation system in which treated water will be drawn into the zone of influence set up at the extraction well and thus reduce the overall effectiveness of groundwater treatment. Efforts also are underway to evaluate the potential effects of reinjection into the existing plume on the effectiveness of pump and treat operations at the 216-B-5 Reverse well.

As requested in the October 6, 1994, letter, RL plans to brief the EPA and Ecology 200-BP-5 OU Managers on the resumption plan in greater detail at a meeting to be held on October 17, 1994. Additional schedules associated with resumption of the tests (e.g, submittal of a treatability test report, etc.) will be provided by October 19, 1994.

Should you have any questions or concerns, please contact Mr. P. M. Pak at 376-4798.

Sincerely,

Julie K. Erickson, Director
Plateau Remediation Division

PRD:PMP

Enclosure

cc w/encl:
P. Beaver, EPA
D. Goswami, Ecology
M. Harmon, EM-442

cc w/o encl:
S. Liedle, BHI

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								OCTOBER															NOVEMBER			
B5 CRIB	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu
Activities	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3
Clean & Rinse Tanks	XXXX	XXXX	XXXX	XXXX																					
Sample Tanks (SAP, Al, VOC, TOC)				XXXX	XXXX		(FIELD SCREEN FOR NITRATE & VOCs.)								NO WORK WILL BEGIN IN THE FIELD UNTIL APPROVED										
UpEnd Tanks & Reconnect System				XXXX	XXXX										DRAWINGS AND PROCEDURES ARE RECEIVED IN THE FIELD.										
Design Carbon Column System (Neppco)																									
Design Preparation			XXXX	XXXX	XXXX										WINTERIZATION ISSUES NEED TO BE ADDRESSED SOON!										
Design Review					XXXX	XXXX	XXXX	AMXX																	
CAD Design (B. Bentz)					XXXX	XXXX	XXXX	XXXX	XXPM																
Procure Materials (Piping, Valves, etc.)								XXXX	XXXX	XXXX															
Install Carbon System (Incl. leak test & Backwash)										XXXX	XXXX	XXXX	XXXX												
Operating Procedures																									
Preparation								XXXX																	
Review									XXXX																
Document Control										XXXX															
Signatures											XXXX														
ATP/OTP																									
Diagrams (PFDs, Elect one line & ladder diagrams)									XXXX	XXXX	XXXX	XXXX													
Procedures																									
Preparation								XXXX																	
Review									XXXX																
Document Control										XXXX															
Signatures											XXXX														
Unresolved Safety Question								XXXX	XXXX	XXXX															
Waste Control Plan			XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX															
Sampling Plan Revisions			XXXX	XXXX	XXXX	XXXX	XXXX	XXXX							XXXX										
Perform ATP/OTP															XXXX										
Flush System & Baseline Sample System																XXXX	XXXX	XXXX	XXXX			XXXX	XXXX	XXXX	XXXX
Assume Clean Tanks and Operate!!!!																▼									
Start Operation																									
	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3

								OCTOBER															NOVEMBER			
B5 REVERSE WELL	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu
Activities	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3
Clean & Rinse Tanks	XXXX	XXXX	XXXX	XXXX	XXXX																				
Sample Tanks (SAP, Al, VOC, TOC)				XXXX	XXXX		(FIELD SCREEN FOR NITRATE & VOCs.)																		
UpEnd Tanks & Reconnect System					XXXX	XXXX	XXXX	XXXX																	
Design Carbon Column System (Tigg)																									
Design Preparation			XXXX	XXXX	XXXX																				
Design Review (Need PRV Info)					XXXX	XXXX	XXXX	AMXX																	
CAD Design (B. Bentz)					XXXX	XXXX	XXXX	XXXX	XXPM																
Procure Materials (Piping, Valves, etc.)								XXXX	XXXX	XXXX															
Install Carbon System (Incl. leak test & Backwash)											GAP DUE TO WORK @ BY					XXXX	XXXX	XXXX	XXXX						
Operating Procedures																									
Preparation								XXXX																	
Review									XXXX																
Document Control										XXXX															
Signatures											XXXX														
ATP/OTP																									
Diagrams (PFDs, Elect one line & ladder diagrams)												XXXX	XXXX	XXXX	XXXX										
Procedures																									
Preparation								XXXX																	
Review									XXXX																
Document Control										XXXX															
Signatures											XXXX														
Test E28-7 Well								XXXX	XXXX	XXXX	XXXX														
Testing of TIGG Vessels		XXXX	XXXX	XXXX	XXXX						XXXX	XXXX	XXXX	XXXX	XXXX										
Unresolved Safety Question																									
Waste Control Plan			XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX															
Sampling Plan Revisions			XXXX	XXXX	XXXX	XXXX	XXXX	XXXX														XXXX			
Perform ATP/OTP																						XXXX			
Flush System & Baseline Sample System																							XXXX	XXXX	XXXX
Assume Clean Tanks and Operate!!!!																							▼		
Start Operation																									
	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3

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